

Remarks

Claims 5 and 7 stand rejected under 35 U.S.C. §102 as being anticipated by or in the alternative under 35 U.S.C. §103 as being obvious over Gandhi. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying Gandhi to those claims. The Applicants respectfully submit that there is a fundamental misunderstanding of particular aspects of Claims 5 and 7 that are explained below. The Applicants believe that a correct understanding of those aspects readily distinguishes Claims 5 and 7 over Gandhi whether in the context of §102 or the in the context of §103.

The Applicants fully agree with the Examiner's very specific comments concerning the disclosure of Gandhi as utilizing dyes and dying processes. The Applicants also agree with the Examiner's listing of the dyes specifically disclosed by Gandhi. The fundamental problem, however, lies with the fact that the claimed pigments are not dyes. Pigments are different from dyes. Those skilled in the art know this difference.

Nonetheless, the rejection turns to *Hawley's Condensed Chemical Dictionary* for the proposition that:

There is no generally accepted distinction between dyes and pigments.

The Applicants respectfully submit that this is simply not the case. The quotation from *Hawley's* is directed to the definition of "colorant." There is no definition provided with respect to dye or pigment. On the other hand, the definition of colorant in *Hawley's* mentions dyes and pigments as examples of colorants. However, this in no way means the dyes and pigments are the same. Interestingly, the *Hawley's* definition of "colorant" is completely inconsistent because it plainly teaches differences that the Applicants have already pointed out. In particular, *Hawley's* states:

Most pigments, so called, are insoluble in organic powders, the coloring effect being a result of their dispersion in a solid liquid medium. Most dyes, on the other hand, are soluble synthetic organic products that are chemically bound to and actually become part of the applied material. Organic dyes are usually brighter and more varied than pigments but tend to be less stable to heat, sunlight, and chemical effects.

The Applicants respectfully submit that the *Hawley's* definition of colorant actually supports the Applicants' position that pigments and dyes are, in fact, different. This is particularly true since pigments achieve their coloring effect by being dispersed in a solid or liquid medium as opposed to dyes which chemically bind to the material and become part of it. These are very, very apparent differences demonstrating that dyes and pigments are not the same. Thus, the Applicants respectfully submit that contrary to the statement in the rejection that there is no generally accepted distinction between dyes and pigments, *Hawley's* actually stands to factually demonstrate that there is.

As noted above, the *Hawley's* definition is directed to colorants. There is no definition of dye and/or pigment. The Applicants, on the other hand, enclose a definition of dyes from *Hackh's Chemical Dictionary*--a classic dictionary long known to and accepted by those skilled in the art as authoritative. This definition of dye confirms the differences set forth in the colorant definition from *Hawley's*. Therefore, the Applicants respectfully submit that there are now two documents on this record that demonstrate that dyes and pigments are different from one another. The Applicants therefore respectfully submit that the rejection is flawed and must be withdrawn on this basis alone.

The reliance in the rejection on *Hawley's* is a reliance on extrinsic evidence beyond the Applicants' Specification. Also, the Applicants' submission of *Hackh's* is further extrinsic evidence. The Applicants respectfully submit that the collective extrinsic evidence on this record demonstrates that there is a difference between pigments and dyes. However, the Applicants respectfully submit that the Court of Appeals for the Federal Circuit in *Phillips v. AWH Corporation*, 75 USPQ 2nd 1321, (Fed. Cir. 2005) requires that the examination rely on intrinsic evidence to determine the meaning of claim language.

In this case, the Applicants used both of "dyes" and "pigments" in their Specification. This may be seen in the background portion of the Application spanning pages 1-4. By virtue of the fact that the Applicants used both terms, it inherently means that the Applicants intended to discuss two different types of materials. The Applicants are, of course, those skilled in the art and well know that dyes and pigments are different and work differently. Thus, they refer to dyes in their Specification when it was appropriate to do so and refer to pigments in their Specification when it was appropriate to do so. Therefore, the Applicants recognized the differences between the two types of materials and used those terms in their ordinary way as would be understood by one skilled in the art. Such uses are not in any way contrary to their ordinary use. Thus, intrinsic evidence controls the meaning

of terms in the Specification under *Phillips*, the Applicants have deliberately used the terms at issue, namely dyes and pigments, because the Applicants knew them to be different. Therefore, the Patent Office must accord those two terms the differences in meanings that are apparent from a plain reading of the Applicants' Specification. The Applicants, therefore respectfully submit that the rejection is still further flawed on this basis and must be withdrawn.

However, there is more. Another fundamental basis of the rejection is as follows:

Although, Gandhi discusses use of "dyes" and Applicant claims "pigments," in the final product, both materials would effectively color the polyurethane substrate. The Applicant does not claim the argued process steps but instead only the final product.

The Applicants respectfully submit that this basis of the rejection is also flawed. Starting with the first portion of that basis, the Applicants agree that Gandhi discloses "dyes" and the Applicants claim "pigments." Thus, the issue revolves around the "final product" wherein both materials would both effectively color the polyurethane substrate. Assuming *arguendo* the truth of the statement that both materials would effectively color the polyurethane substrate, which the Applicants respectfully submit has not been demonstrated, this makes no difference. The reason that it makes no difference is that the final product would, in fact, contain pigment. On the other hand, the Gandhi product would, in fact, contain dyes bound to the material. The problem with this is that the Applicants do not claim dyes. Instead, the Applicants claim pigments. Thus, the final product of the Applicants contains pigments while the final product of Gandhi contains dyes. The fact that both materials are colored is irrelevant to what the Applicants actually claim. The Applicants therefore respectfully submit that this aspect of the rejection is also flawed and the rejection should be withdrawn.

As noted above, the rejection also takes the position that the Applicants do not claim the argued process steps. This is correct with respect to Claim 5. Claim 5 is a product claim and does not contain method limitations. On the other hand, Claim 7 is entirely a method claim and contains method steps wherein the method steps utilize pigments. The Applicants provide direct quotes from Claim 7 as follows:

impregnating a fiber-entangled substrate ... with a polyurethane solution, wherein the polyurethane solution contains ... pigment ...

The Applicants respectfully submit that nothing could be clearer. This is a process that utilizes pigments. On the other hand, Gandhi nowhere teaches a process involving pigments. Instead, Gandhi discloses process steps utilizing dyes. The Applicants have now irrefutably established that dyes and pigments are different. Therefore, the Applicants respectfully submit that Gandhi fails to disclose specifically claimed subject matter of Claim 7. Moreover, Gandhi leads those skilled in the art away from the Applicants' claimed subject matter by employing dyes, as opposed to the claimed utilization of pigments.

Further with respect to the Gandhi disclosure and the claimed methodology of Claim 7, the Applicants as noted above, provide a process which includes impregnating a fiber entangled substrate with a polyurethane solution, wherein the polyurethane solution contains pigment. The Gandhi process is very different and fundamentally involves taking a substrate of non-woven microfibers, impregnating the substrate with polyurethane and then subjecting the impregnated substrate to a dying procedure by placing the substrate in a dye bath taken from the dispersed dyes disclosed in the upper portion of column 2 of Gandhi. Then, the dyed substrate was scoured. Thus, the distinction between Claim 7 and Gandhi. However, these differences in processes have an application to Claim 5, particularly with respect to the position in the rejection that "in the final products, both materials would effectively color the polyurethane substrate." In that regard the Applicants respectfully submit that this simply would not be true. This is for the following reasons.

As noted above, Gandhi impregnates a non-woven substrate with polyurethane. That polyurethane is allowed to dry. (Otherwise the polyurethane solution would not stay impregnated in the substrate when immersed in the dye bath and agitated.) After the polyurethane is dried onto the microfibers comprising the substrate, the substrate is immersed in the dye bath whereby the dye penetrates or permeates into the polyurethane "skin" formed around the microfibers. It is critical to understand that the dye actually penetrates into the polyurethane skin.

If one skilled in the art were to look to Gandhi and decide to substitute one of the Applicants' pigments (despite no disclosure or motivation to do so), the result would be quite different. Thus, hypothetically picking the Applicants' indigo pigment, and the process of Gandhi, utilizing that indigo pigment would be as follows:

A substrate comprising microfibers would be impregnated with polyurethane. The polyurethane would then be dried. Then, a pigment bath would be prepared and the substrate

immersed in the pigment bath. However, because pigment is different from dye, the pigment would not penetrate or permeate into the polyurethane skin. Instead, the pigment would at least preliminarily adhere as pigment particles on the outer surface of the polyurethane skin. Once the bath solution dried, there would again at best be pigment particles adhered to the top surface of the polyurethane skin. There would not be, however, any penetration or permeation into the polyurethane skin.

Then, according to Gandhi, the textile material would be subjected to a scouring process. The result of such scouring would be that the vast majority of the pigment particles preliminarily adhered to the polyurethane skin would be washed away or removed.


Thus, at the completion of the Gandhi process, the final product would not be the same and the final product would not “effectively” be colored. This is because the vast majority of the pigment particles would have been removed, thereby leaving a non-colored or only slightly-colored polyurethane skin in the textile substrate. This would be sharply contrasted to the fully-colored textile substrate in the case of using the Gandhi dyes because those dyes penetrate or permeate into the polyurethane skin and are not removed by the Gandhi scouring process. Therefore, the Applicants respectfully submit that it would be erroneous to state that the Applicants’ final product and the final product of Gandhi would “effectively color the polyurethane substrate.” In fact, the Applicants’ pigments would not effectively color the polyurethane substrate of Gandhi. Withdrawal of the rejection of Claims 5 and 7 is accordingly respectfully requested.

The Applicants have added Claim 9 that recites specific classes of pigments. Support for these particular pigments can be found in paragraph [0055] of page 11 of the Applicants’ Specification. There is no overlap between those specifically claimed classes of pigments and the dyes of Gandhi. Accordingly, Gandhi is inapplicable to Claim 9.

Claims 6 and 8 stand rejected under 35 U.S.C. §103 over the hypothetical combination of Pedain with Gandhi. The Applicants respectfully submit that hypothetically combining Pedain with Gandhi does not cure the deficiency set forth above with respect to Gandhi. Withdrawal of that rejection is also respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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